

THE INVENTION CLAIMED IS:

1. A large diameter check valve, comprising:  
an upstream inlet part mountable on the discharge end of a conduit;  
a downstream outlet part adapted to prevent backflow of fluid through the check valve;  
a transition part located between the upstream inlet part and the downstream outlet part; and  
a rigid support connected to an upper portion only of at least said inlet part and said transition part.
2. The check valve of claim 1, where said support is embedded within said check valve.
3. The check valve of claim 1, where said support includes a plate.
4. The check valve of claim 1, where said support is attached to the outer surface of said check valve.
5. The check valve of claim 1, where said support is attached to the inner surface of said check valve.
6. The check valve of claim 1, where said outlet part is mounted with a vertical orientation.
7. The check valve of claim 1, further comprising a flange on the upstream inlet part.
8. The check valve of claim 1, where said check valve is made at least in part from an elastomeric material.
9. The check valve of claim 8, further comprising a synthetic fiber reinforcement in said elastomeric material.

10. The check valve of claim 1, where said upstream inlet part is made at least in part from a stiff durable material.

11. The check valve of claim 1, where said upstream inlet part includes a polyester fabric reinforcement.

12. The check valve of claim 2, where said support plate includes a plurality of holes.

13. The check valve of claim 1 where said support comprises a plate having at least one reinforcing rib thereon.

14. The check valve of claim 3 further comprising a first flange on said upstream inlet part, and where said support further comprises a second flange being connected to said plate, said first flange being connected to said second flange.

15. The check valve of claim 1, where said support is comprised of a curved plate connected to said inlet part and at least one bar being attached to said curved plate and at least to said transition part.

16. The check valve of claim 15, further comprising a first flange on said upstream inlet part, and where said support further comprises a second flange connected to said curved plate, said first flange being connected to said second flange.

17. A support mountable on a check valve having an inlet part, an outlet part and a transition part, the support comprising:

a plate having a size and contour similar to an upper portion of at least the inlet part and the transition part of the check valve; and

means for securing the plate to the upper portion of the check valve.

18. The support of claim 17, where said plate includes at least one rib.

19. The support of claim 17, further comprising a flange connected to said plate, said flange being suitable for connecting to an upper portion of a duckbill check valve that includes a flange.

20. The support of claim 17 wherein the plate includes holes to assist in securing the plate to the check valve.

21. A support mountable on a duckbill check valve, comprising a short curved plate capable of being connected to the inlet part of the duckbill check valve, and at least one bar connected to the curved plate and capable of being connected to at least the transition part of the check valve.

22. The support of claim 21, further comprising a flange connected to said short curved plate, said flange being suitable for connecting to an upper portion of a duckbill check valve that includes a flange.

23. A method for supporting a large diameter check valve consisting of an inlet part, a transition part, and an outlet part including the steps of:

providing a rigid, curved plate whose contour and size matches an upper portion of at least the inlet part of the check valve;

securing the curved plate to the upper portion of the check valve; and

supporting at least the inlet part and transition part of the check valve with a cantilever effect via the curved plate.

24. The method of claim 23, where said plate is installed on the outer surface of the check valve and the plate is further secured to an end of a conduit.

25. The method of claim 23, where said plate is installed on the inner surface of the check valve and the plate is further secured to an end of a conduit.

26. The method of claim 23 wherein the plate is embedded within the check valve.

27. The method of claim 23 including the step of attaching a bar to the curved plate and further attaching the bar to the transition part to facilitate the cantilever effect.